

CLAIMS

What is claimed is:

1. A collaborative filtering system, comprising:
a filtering component that employs Lift, smoothed *via* cutoff smoothing techniques, as a measure of association for scoring at least one item of an item set; wherein the filtering component additionally employing at least one multiple-score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.
2. The system of claim 1, the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set.
3. The system of claim 1, the multiple-score collaborative filtering evaluation method comprising utilizing a highest value score of scores applicable to an item as the single score.
4. The system of claim 3, the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set.
5. A collaborative filtering system, comprising:
a filtering component that employs Lift, smoothed *via* prior on counts smoothing techniques, as a measure of association for scoring at least one item of an item set; wherein the filtering component additionally employing at least one multiple-score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.

6. The system of claim 5, the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set.

7. The system of claim 5, the multiple-score collaborative filtering evaluation method comprising utilizing a highest value score of scores applicable to an item as the single score.

8. The system of claim 7, the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set.

9. A collaborative filtering system, comprising:
a filtering component that employs Lift, smoothed *via* informative priors on measures of association smoothing techniques, as a measure of association for scoring at least one item of an item set; wherein the filtering component additionally employing at least one multiple-score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.

10. The system of claim 9, the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set.

11. The system of claim 9, the multiple-score collaborative filtering evaluation method comprising utilizing a highest value score of scores applicable to an item as the single score.

12. The system of claim 11, the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set.

13. A collaborative filtering system, comprising:
a filtering component that employs Lift, smoothed *via* nonuniform prior smoothing techniques, as a measure of association for scoring at least one item of an item set; wherein the filtering component additionally employing at least one multiple-score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.
14. The system of claim 13, the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set.
15. The system of claim 13, the multiple-score collaborative filtering evaluation method comprising utilizing a highest value score of scores applicable to an item as the single score.
16. The system of claim 15, the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set.
17. A collaborative filtering system, comprising:
a filtering component that employs Weight of Evidence, smoothed *via* cutoff smoothing techniques, as a measure of association for scoring at least one item of an item set; wherein the filtering component additionally employing at least one multiple-score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.
18. The system of claim 17, the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set.

19. The system of claim 17, the multiple-score collaborative filtering evaluation method comprising utilizing a highest value score of scores applicable to an item as the single score.

20. The system of claim 19, the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set.

21. A collaborative filtering system, comprising:
a filtering component that employs Weight of Evidence, smoothed *via* prior on counts smoothing techniques, as a measure of association for scoring at least one item of an item set; the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set; and wherein the filtering component additionally employing at least one multiple-score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.

22. The system of claim 21, the multiple-score collaborative filtering evaluation method comprising utilizing a highest value score of scores applicable to an item as the single score.

23. A collaborative filtering system, comprising:
a filtering component that employs Weight of Evidence, smoothed *via* informative priors on measures of association smoothing techniques, as a measure of association for scoring at least one item of an item set; wherein the filtering component additionally employing at least one multiple-score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.

24. The system of claim 23, the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set.

25. The system of claim 23, the multiple-score collaborative filtering evaluation method comprising utilizing a highest value score of scores applicable to an item as the single score.

26. The system of claim 25, the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set.

27. A collaborative filtering system, comprising:
a filtering component that employs Weight of Evidence, smoothed *via* nonuniform prior smoothing techniques, as a measure of association for scoring at least one item of an item set; wherein the filtering component additionally employing at least one multiple-score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.

28. The system of claim 27, the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set.

29. The system of claim 27, the multiple-score collaborative filtering evaluation method comprising utilizing a highest value score of scores applicable to an item as the single score.

30. The system of claim 29, the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set.

31. A collaborative filtering system, comprising:
a filtering component that employs Yule's Q, smoothed *via* cutoff smoothing techniques, as a measure of association for scoring at least one item of an item set; wherein the filtering component additionally employing at least one multiple-score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.

32. The system of claim 31, the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set.

33. The system of claim 31, the multiple-score collaborative filtering evaluation method comprising utilizing a highest value score of scores applicable to an item as the single score.

34. The system of claim 33, the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set.

35. A collaborative filtering system, comprising:
a filtering component that employs Yule's Q, smoothed *via* prior on counts smoothing techniques, as a measure of association for scoring at least one item of an item set; the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set; and wherein the filtering component additionally employing at least one multiple-score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.

36. The system of claim 35, the multiple-score collaborative filtering evaluation method comprising utilizing a highest value score of scores applicable to an item as the single score.

37. A collaborative filtering system, comprising:

a filtering component that employs Yule's Q, smoothed *via* informative priors on measures of association smoothing techniques, as a measure of association for scoring at least one item of an item set; wherein the filtering component additionally employing at least one multiple-score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.

38. The system of claim 37, the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set.

39. The system of claim 37, the multiple-score collaborative filtering evaluation method comprising utilizing a highest value score of scores applicable to an item as the single score.

40. The system of claim 39, the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set.

41. A collaborative filtering system, comprising:

a filtering component that employs Yule's Q, smoothed *via* nonuniform prior smoothing techniques, as a measure of association for scoring at least one item of an item set; wherein the filtering component additionally employing at least one multiple-score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.

42. The system of claim 41, the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set.

43. The system of claim 41, the multiple-score collaborative filtering evaluation method comprising utilizing a highest value score of scores applicable to an item as the single score.

44. The system of claim 43, the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set.

45. A collaborative filtering system, comprising:
a filtering component that employs tau measures, smoothed *via* cutoff smoothing techniques, as a measure of association for scoring at least one item of an item set; wherein the filtering component additionally employing at least one multiple-score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.

46. The system of claim 45, the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set.

47. The system of claim 45, the multiple-score collaborative filtering evaluation method comprising utilizing a highest value score of scores applicable to an item as the single score.

48. The system of claim 47, the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set.

49. A collaborative filtering system, comprising:
a filtering component that employs tau measures, smoothed *via* prior on counts smoothing techniques, as a measure of association for scoring at least one item of an item set; the item set comprising a higher-order item set wherein more than one item is

represented on a left-hand side of an association rule applicable to at least one item in the item set; and wherein the filtering component additionally employing at least one multiple-score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.

50. The system of claim 49, the multiple-score collaborative filtering evaluation method comprising utilizing a highest value score of scores applicable to an item as the single score.

51. A collaborative filtering system, comprising:
a filtering component that employs tau measures, smoothed *via* informative priors on measures of association smoothing techniques, as a measure of association for scoring at least one item of an item set; wherein the filtering component additionally employing at least one multiple-score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.

52. The system of claim 51, the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set.

53. The system of claim 51, the multiple-score collaborative filtering evaluation method comprising utilizing a highest value score of scores applicable to an item as the single score.

54. The system of claim 53, the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set.

55. A collaborative filtering system, comprising:
a filtering component that employs tau measures, smoothed *via* nonuniform prior smoothing techniques, as a measure of association for scoring at least one item of an item

set; wherein the filtering component additionally employing at least one multiple-score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.

56. The system of claim 55, the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set.

57. The system of claim 55, the multiple-score collaborative filtering evaluation method comprising utilizing a highest value score of scores applicable to an item as the single score.

58. The system of claim 57, the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set.

59. A collaborative filtering system, comprising:
a filtering component that employs Phi, smoothed *via* cutoff smoothing techniques, as a measure of association for scoring at least one item of an item set; wherein the filtering component additionally employing at least one multiple-score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.

60. The system of claim 59, the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set.

61. The system of claim 59, the multiple-score collaborative filtering evaluation method comprising utilizing a highest value score of scores applicable to an item as the single score.

62. The system of claim 61, the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set.

63. A collaborative filtering system, comprising:
a filtering component that employs Φ , smoothed *via* prior on counts smoothing techniques, as a measure of association for scoring at least one item of an item set; the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set; and wherein the filtering component additionally employing at least one multiple-score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.

64. The system of claim 63, the multiple-score collaborative filtering evaluation method comprising utilizing a highest value score of scores applicable to an item as the single score.

65. A collaborative filtering system, comprising:
a filtering component that employs Φ , smoothed *via* informative priors on measures of association smoothing techniques, as a measure of association for scoring at least one item of an item set; wherein the filtering component additionally employing at least one multiple-score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.

66. The system of claim 65, the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set.

67. The system of claim 65, the multiple-score collaborative filtering evaluation method comprising utilizing a highest value score of scores applicable to an item as the single score.

68. The system of claim 67, the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set.

69. A collaborative filtering system, comprising:
a filtering component that employs Φ , smoothed *via* nonuniform prior smoothing techniques, as a measure of association for scoring at least one item of an item set; wherein the filtering component additionally employing at least one multiple-score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.

70. The system of claim 69, the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set.

71. The system of claim 69, the multiple-score collaborative filtering evaluation method comprising utilizing a highest value score of scores applicable to an item as the single score.

72. The system of claim 71, the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set.

73. A collaborative filtering system, comprising:
a filtering component that employs cross-product, smoothed *via* cutoff smoothing techniques, as a measure of association for scoring at least one item of an item set; wherein the filtering component additionally employing at least one multiple-score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.

74. The system of claim 73, the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set.

75. The system of claim 73, the multiple-score collaborative filtering evaluation method comprising utilizing a highest value score of scores applicable to an item as the single score.

76. The system of claim 75, the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set.

77. A collaborative filtering system, comprising:
a filtering component that employs cross-product, smoothed *via* prior on counts smoothing techniques, as a measure of association for scoring at least one item of an item set; the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set; and wherein the filtering component additionally employing at least one multiple-score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.

78. The system of claim 77, the multiple-score collaborative filtering evaluation method comprising utilizing a highest value score of scores applicable to an item as the single score.

79. A collaborative filtering system, comprising:
a filtering component that employs cross-product, smoothed *via* informative priors on measures of association smoothing techniques, as a measure of association for scoring at least one item of an item set; wherein the filtering component additionally employing at least one multiple-score collaborative filtering evaluation method to obtain

a single score for an item when more than one measure of association score applies to that item.

80. The system of claim 79, the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set.

81. The system of claim 79, the multiple-score collaborative filtering evaluation method comprising utilizing a highest value score of scores applicable to an item as the single score.

82. The system of claim 81, the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set.

83. A collaborative filtering system, comprising:
a filtering component that employs cross-product, smoothed *via* nonuniform prior smoothing techniques, as a measure of association for scoring at least one item of an item set; wherein the filtering component additionally employing at least one multiple-score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.

84. The system of claim 83, the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set.

85. The system of claim 83, the multiple-score collaborative filtering evaluation method comprising utilizing a highest value score of scores applicable to an item as the single score.

86. The system of claim 85, the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set.

87. A collaborative filtering system, comprising:
a filtering component that employs log of cross-product, smoothed *via* cutoff smoothing techniques, as a measure of association for scoring at least one item of an item set; wherein the filtering component additionally employing at least one multiple-score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.

88. The system of claim 87, the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set.

89. The system of claim 87, the multiple-score collaborative filtering evaluation method comprising utilizing a highest value score of scores applicable to an item as the single score.

90. The system of claim 89, the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set.

91. A collaborative filtering system, comprising:
a filtering component that employs log of cross-product, smoothed *via* prior on counts smoothing techniques, as a measure of association for scoring at least one item of an item set; the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set; and wherein the filtering component additionally employing at least one multiple-score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.

92. The system of claim 91, the multiple-score collaborative filtering evaluation method comprising utilizing a highest value score of scores applicable to an item as the single score.

93. A collaborative filtering system, comprising:
a filtering component that employs log of cross-product, smoothed *via* informative priors on measures of association smoothing techniques, as a measure of association for scoring at least one item of an item set; wherein the filtering component additionally employing at least one multiple-score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.

94. The system of claim 93, the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set.

95. The system of claim 93, the multiple-score collaborative filtering evaluation method comprising utilizing a highest value score of scores applicable to an item as the single score.

96. The system of claim 95, the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set.

97. A collaborative filtering system, comprising:
a filtering component that employs log of cross-product, smoothed *via* nonuniform prior smoothing techniques, as a measure of association for scoring at least one item of an item set; wherein the filtering component additionally employing at least one multiple-score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.

98. The system of claim 97, the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set.

99. The system of claim 97, the multiple-score collaborative filtering evaluation method comprising utilizing a highest value score of scores applicable to an item as the single score.

100. The system of claim 99, the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set.

101. A method of data analysis, comprising:
creating a collaborative filtering system that employs Lift, smoothed *via* cutoff smoothing techniques, as a measure of association for scoring at least one item of an item set; and
employing at least one multiple-score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.

102. A method of data analysis, comprising:
creating a collaborative filtering system that employs Lift, smoothed *via* prior on counts smoothing techniques, as a measure of association for scoring at least one item of an item set; and
employing at least one multiple-score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.

103. A method of data analysis, comprising:

creating a collaborative filtering system that employs Lift, smoothed *via* informative priors on measures of association smoothing techniques, as a measure of association for scoring at least one item of an item set; and

employing at least one multiple-score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.

104. A method of data analysis, comprising:

creating a collaborative filtering system that employs Lift, smoothed *via* nonuniform prior smoothing techniques, as a measure of association for scoring at least one item of an item set; and

employing at least one multiple-score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.

105. A method of data analysis, comprising:

creating a collaborative filtering system that employs Weight of Evidence, smoothed *via* cutoff smoothing techniques, as a measure of association for scoring at least one item of an item set; and

employing at least one multiple-score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.

106. A method of data analysis, comprising:

creating a collaborative filtering system that employs Weight of Evidence, smoothed *via* prior on counts smoothing techniques, as a measure of association for scoring at least one item of an item set; the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set; and

employing at least one multiple-score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.

107. A method of data analysis, comprising:

creating a collaborative filtering system that employs Weight of Evidence, smoothed *via* informative priors on measures of association smoothing techniques, as a measure of association for scoring at least one item of an item set; and

employing at least one multiple-score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.

108. A method of data analysis, comprising:

creating a collaborative filtering system that employs Weight of Evidence, smoothed *via* nonuniform prior smoothing techniques, as a measure of association for scoring at least one item of an item set; and

employing at least one multiple-score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.

109. A method of data analysis, comprising:

creating a collaborative filtering system that employs Yule's Q, smoothed *via* cutoff smoothing techniques, as a measure of association for scoring at least one item of an item set; and

employing at least one multiple-score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.

110. A method of data analysis, comprising:

creating a collaborative filtering system that employs Yule's Q, smoothed *via* prior on counts smoothing techniques, as a measure of association for scoring at least one

item of an item set; the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set; and

employing at least one multiple-score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.

111. A method of data analysis, comprising:

creating a collaborative filtering system that employs Yule's Q, smoothed *via* informative priors on measures of association smoothing techniques, as a measure of association for scoring at least one item of an item set; and

employing at least one multiple-score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.

112. A method of data analysis, comprising:

creating a collaborative filtering system that employs Yule's Q, smoothed *via* nonuniform prior smoothing techniques, as a measure of association for scoring at least one item of an item set; and

employing at least one multiple-score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.

113. A method of data analysis, comprising:

creating a collaborative filtering system that employs tau measures, smoothed *via* cutoff smoothing techniques, as a measure of association for scoring at least one item of an item set; and

employing at least one multiple-score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.

114. A method of data analysis, comprising:

creating a collaborative filtering system that employs tau measures, smoothed *via* prior on counts smoothing techniques, as a measure of association for scoring at least one item of an item set; the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set; and

employing at least one multiple-score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.

115. A method of data analysis, comprising:

creating a collaborative filtering system that employs tau measures, smoothed *via* informative priors on measures of association smoothing techniques, as a measure of association for scoring at least one item of an item set; and

employing at least one multiple-score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.

116. A method of data analysis, comprising:

creating a collaborative filtering system that employs tau measures, smoothed *via* nonuniform prior smoothing techniques, as a measure of association for scoring at least one item of an item set; and

employing at least one multiple-score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.

117. A method of data analysis, comprising:

creating a collaborative filtering system that employs Phi, smoothed *via* cutoff smoothing techniques, as a measure of association for scoring at least one item of an item set; and

employing at least one multiple-score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.

118. A method of data analysis, comprising:

creating a collaborative filtering system that employs Φ , smoothed *via* prior on counts smoothing techniques, as a measure of association for scoring at least one item of an item set; the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set; and

employing at least one multiple-score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.

119. A method of data analysis, comprising:

creating a collaborative filtering system that employs Φ , smoothed *via* informative priors on measures of association smoothing techniques, as a measure of association for scoring at least one item of an item set; and

employing at least one multiple-score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.

120. A method of data analysis, comprising:

creating a collaborative filtering system that employs Φ , smoothed *via* nonuniform prior smoothing techniques, as a measure of association for scoring at least one item of an item set; and

employing at least one multiple-score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.

121. A method of data analysis, comprising:

creating a collaborative filtering system that employs cross-product, smoothed *via* cutoff smoothing techniques, as a measure of association for scoring at least one item of an item set; and

employing at least one multiple-score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.

122. A method of data analysis, comprising:

creating a collaborative filtering system that employs cross-product, smoothed *via* prior on counts smoothing techniques, as a measure of association for scoring at least one item of an item set; the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set; and

employing at least one multiple-score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.

123. A method of data analysis, comprising:

creating a collaborative filtering system that employs cross-product, smoothed *via* informative priors on measures of association smoothing techniques, as a measure of association for scoring at least one item of an item set; and

employing at least one multiple-score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.

124. A method of data analysis, comprising:

creating a collaborative filtering system that employs cross-product, smoothed *via* nonuniform prior smoothing techniques, as a measure of association for scoring at least one item of an item set; and

employing at least one multiple-score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.

125. A method of data analysis, comprising:

creating a collaborative filtering system that employs log of cross-product, smoothed *via* cutoff smoothing techniques, as a measure of association for scoring at least one item of an item set; and

employing at least one multiple-score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.

126. A method of data analysis, comprising:

creating a collaborative filtering system that employs log of cross-product, smoothed *via* prior on counts smoothing techniques, as a measure of association for scoring at least one item of an item set; the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set; and

employing at least one multiple-score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.

127. A method of data analysis, comprising:

creating a collaborative filtering system that employs log of cross-product, smoothed *via* informative priors on measures of association smoothing techniques, as a measure of association for scoring at least one item of an item set; and

employing at least one multiple-score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.

128. A method of data analysis, comprising:

creating a collaborative filtering system that employs log of cross-product, smoothed *via* nonuniform prior smoothing techniques, as a measure of association for scoring at least one item of an item set; and

employing at least one multiple-score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.

129. A collaborative filtering system, comprising:
a filtering component that employs Lift as a measure of association for scoring at least one item of an item set.

130. A kiosk employing the system of claim 129.

131. A search engine employing the system of claim 129.

132. A set-top box employing the system of claim 129.

133. A television guide employing the system of claim 129.

134. A video guide employing the system of claim 129.

135. A media guide employing the system of claim 129.

136. A music guide employing the system of claim 129.

137. A merchandizing system employing the system of claim 129.

138. A targeted advertising system employing the system of claim 129.

139. A recommendation system employing the system of claim 129.

140. A commerce server employing the system of claim 129.
141. A collaborative filtering system, comprising:
a filtering component that employs informative priors on a measure of association for smoothing the measure of association utilized in collaborative filtering.
142. A method of data analysis, comprising:
employing Lift as a measure of association in a collaborative filtering system for scoring at least one item of an item set.
143. A method of data analysis, comprising:
employing informative priors on a measure of association for smoothing the measure of association utilized in collaborative filtering.
144. A data analysis system, comprising:
means for collaborative filtering based, at least in part, on employing Lift as a measure of association for scoring at least one item.
145. A data packet transmitted between two or more computer components that facilitates collaborative filtering, the data packet comprised of, at least in part, collaborative filtering data based, at least in part, on employing Lift as a measure of association for scoring at least one item.
146. A computer readable medium having stored thereon computer executable components of the system of claim 129.
147. A device employing the method of claim 142 comprising at least one selected from the group consisting of a computer, a server, and a handheld electronic device.

148. A device employing the system of claim 129 comprising at least one selected from the group consisting of a computer, a server, and a handheld electronic device.

149. A computer readable medium having stored thereon computer executable instructions for performing the method of claim 142.